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Finding their way: a profile of young Canadian graduates

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This paper represents the views of the authors and does not necessarily reflect the opinions of Statistics Canada.

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Education, skills and learning

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Executive summary

This report uses data from the National Graduates Survey to paint a portrait of university and college graduates who are traditionally seen as the "mainstream" student population. It examines the labour market outcomes of three different cohorts of young graduates starting their transition into the work force at three very different points of the economic cycle: 1986, 1990 and 1995.

The study looks at young college and bachelor graduates who entered their programs directly from high school and thus excludes older graduates. Young bachelor graduates represent close to half of each graduating class. Young college graduates who make the transition directly from high school to college account for a smaller share of all college graduates in each graduating class because colleges tend to attract large numbers of adult learners.

This study is about young bachelor and college graduates who went straight from high school into their post-secondary program.

From 1990 to 1995, significant changes occurred in time taken to complete programs. In colleges, the proportion of students completing their program in a year or less increased. For bachelor graduates, the trend was reversed: 1995 graduates took longer to complete their program, on average, than 1990 graduates.

While the number of young graduates increased across the board in all fields of study between 1990 and 1995, much of the growth was due to women graduating from university, and men graduating from college. At the college level, male graduates represented 72% of the increase in the number of young graduates between 1990 and 1995, while 85% of the growth in young bachelor graduates were women. These trends were reflected in almost all fields of study.

In all three graduating classes, young college and bachelor graduates were more likely to have a job than youth with only a high school diploma. College graduates made the transition to the labour market more quickly, but for the classes of 1986 and 1990, bachelor graduates caught up after five years. This was not the case for the class of 1995. The difference in employment rates diminished by 2000, but young college graduates were still more likely to have a job.

Bachelor graduates were more likely than college graduates to hold a job requiring their level of education. For example, among 1995 young university graduates who were working in 2000, 23% held a job requiring less than their level of education, versus 38% of college graduates.

In general, unemployment rates for bachelor graduates were less sensitive to shifts in labour market conditions than the rates for the community college graduates, indicating that higher levels of education may help to insulate individuals from the effects of economic downturns. Unemployment rates for young community college graduates follow a pattern similar to rates for young adults in general through economic upswings and downturns, while the rate for university graduates is less likely to be affected by the business cycle.

A university degree also tends to pay better than a college diploma. Although young bachelor graduates are somewhat less likely than college graduates to be working full-time two years after graduation, those working full-time have higher earnings. Median earnings for young 1995 bachelor graduates were over 20% higher than for college students both two and five years after graduation. Engineering and applied sciences consistently pay the highest earnings for both college and bachelor graduates.

Even though young college and bachelor graduates in the class of 1995 owed more at graduation than the 1990 graduates, they were paying those loans off at a faster rate than the class of 1990. Given the lengthier program requirements and higher tuition associated with a university program, it is not surprising that levels of student debt were higher for the bachelor graduates than college graduates.

Graduates' ability to re-pay student loans is affected by a variety of factors such as interest rates, labour market conditions and the amount of any other debts they hold.

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1 Introduction

"Post-secondary education is already required for most of the new jobs in today's economy and will be demanded for almost all new jobs in the 21st century. For those without a post-secondary education, employment prospects are dimming rapidly. But post-secondary education is about more than achieving our individual and collective economic potential. It is a means by which we can better understand the world around us, play a more confident role as citizens in a democratic society, and lead more satisfying lives."

—Knowledge Matters: Canada's Innovation Strategy, 2002

A highly skilled work force is essential to innovation and economic growth. According to *Canada's Innovation Strategy*, countries that succeed in the 21st century will have creative, adaptable and skilled citizens. Canada's post-secondary system plays a crucial role in building a citizenry able to chart its course in a competitive economy, while keeping sight of social values such as equity and inclusion.

The aim of the Innovation Strategy is that all qualified Canadians have access to high-quality post-secondary education and that, over the next decade, half of all 25-64 year olds, including an increased proportion of citizens from at-risk groups, will have post-secondary credentials. The success of the Innovation Strategy hinges on high rates of participation in post-secondary education, a skill mix that meets emerging labour market needs and a capacity to attract and retain a highly qualified work force.

This report looks at graduates from the mainstream of the student population, using results from the National Graduates Survey. More specifically, they are young bachelors and college graduates who entered university or college directly from high school. The study paints a portrait of the labour market outcomes and earnings of three graduating classes: 1986, 1990 and 1995. Older students, who tend to have different characteristics and work experience, are not included in this study, although they are covered by the survey. Future analysis of the experiences of older students would address such issues as lifelong learning and continuing education.

The study uses data from the National Graduate Survey to paint a portrait of labour market outcomes of three graduating classes: 1986, 1990 and 1995.

In an environment of rising post-secondary costs, the decision to stay in school is influenced by young people's confidence in being able to secure a good job. Although labour market conditions may not be the main driver in the decision to pursue post-secondary studies (see Bowlby and Jennings, 1999), job prospects and earnings potential can influence decisions on whether to take on debt.

Young people and their parents may wonder these days whether a university or college education is "worth it", given the rising cost. Although the National Graduates Survey cannot tell us the precise return on investment that a post-secondary education affords, it does supply a great deal of information about the short and medium-term labour market outcomes of graduates.

This portrait attempts to answer the following questions:

- What are the employment prospects for college and bachelor graduates, both in terms of the transition to employment and job quality?
- How well do college and bachelor graduates fare in the labour market when times are difficult?
- How well do graduates from different disciplines do?
- How did the situation change over the 15 years covered by the study?

The National Graduates Survey

The National Graduate Survey (NGS) is designed to measure the short to medium-term labour market outcomes of graduates from university, community college and trade-vocational programs. NGS interviews graduates two and five years after graduation. To date, five graduating classes have been surveyed: 1982, 1986, 1990, 1995 and 2000. Results for the class of 2000, interviewed for the first time in May 2002, are not yet available but will be released in 2003.

The NGS offers insights into how well different graduating class classes fared in their early labour market experiences. The samples are also sufficiently large to look at different pathways, for example, those who went on to further studies rather than moving immediately into the work force. For the Class of 1995, the sample for the interviews conducted in 2000 was 29,000, fully 10% of the graduating class (294,000). The sample is also stratified to provide a good representation of the graduating class by province, level and discipline.

For the purposes of this analysis, bachelor graduates include Quebec graduates who began their studies in CEGEP.

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11 Trends in the young post-secondary population

Graduates can follow many pathways through work, school and non-market activities before achieving their post-secondary degree or diploma. This report focuses on the mainstream graduate population, defined as follows:

- bachelor or community college graduates,
- below age 25 at the time of graduation,
- highest level of education at the time they entered college or university was high school or equivalent,
- have not obtained any further degrees or diplomas,
- going to school 12 months prior to starting their post-secondary program, and
- in Canada at the time of the interview.

While all pathways through post-secondary are interesting, the study population was restricted in this report to control for differences across and within cohorts that would be linked to age and previous work experience. The study population is more homogeneous than one that would include all graduates. This makes it easier to analyse the effect of labour market conditions and of choices made by students, such as college versus university, or one discipline versus another.

Over 60% of all bachelor graduates were below age 25 at the time of graduation. This holds true for all three graduating classes covered in this study. Close to 90% of these young graduates had only a high school education when they entered university and just over 90% of these were going to school 12 months prior to starting university. Thus, young graduates who moved straight from high school into university account for about half of all bachelor graduates, a proportion that has been stable through time (Table 1).

Young bachelor graduates who went straight from high school to university represent about half of all bachelor graduates. At the college level the proportion is lower and on a downward trend, from 46% in 1986 and 39% in 1990, to 34% in 1995.

Table 1
Target population of this study

	1986	1990	1995
All college graduates in Canada	62,000	55,600	80,300
... under age 25,	46,400	37,400	48,600
... with no education beyond high school prior to entering program,	38,100	29,400	37,000
... in school 12 months prior to entering program,	28,800	21,800	26,900
... and without additional degrees or diplomas	27,100	21,300	26,000
All bachelor graduates in Canada	102,700	102,400	128,000
... under age 25,	61,700	62,800	76,800
... with no education beyond high school prior to entering program,	54,500	56,600	65,800
... in school 12 months prior to entering program,	49,500	52,400	61,400
... and without additional degrees or diplomas	44,800	49,300	57,000

Note: The full population of graduates refers to graduates who were living in Canada 12 months prior to starting their program. In other words, it excludes students from other countries who came to Canada to study.

On the other hand, the average age of community college graduates has been steadily rising. While 75% of the graduating class of 1986 was under age 25, the proportion dropped to 60% for the class of 1995. Similarly, the proportion of young college graduates who had high school completion or less before entering their program declined from 82% in 1986 to 76% in 1995. Only about three-quarters of these young graduates were in school 12 months before entering their program. So the young graduates who made the transition directly from high school to community college account for a smaller, and shrinking, proportion of all college graduates: from 46% in 1986 to 39% in 1990 and 34% in 1995.

Another notable shift is the time taken by graduates to complete their program. At the college level, the proportion of graduates completing in less than one year nearly doubled, rising from 6% for the class of 1990 to 11% for the class of 1995 (Table 2). Some of the increase may be due to changes in the reporting of trade-vocational programs. Many one-year pre-employment or pre-apprenticeship programs now require high school completion, an upgrading that may shift them from trade-vocational to college-level programs. Close to three-quarters of students enrolled full-time in college took one or two years to complete their program.

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Table 2

Percentage distribution of young graduates by length of time taken to complete program (full-time students only)

	1990	1995
College		
Less than 1 year	5.6	10.9
1 year	36.5	34.9
2 years	40.0	37.7
3 years	14.7	13.1
4 years	2.8	2.6
More than 4 years	3.6	0.9
University		
Less than 3 years	28.2	27.9
3 years	50.7	45.7
4 years	17.5	21.3
More than 4 years	3.5	5.1

At the bachelor level, the proportion of full-time students who had completed their degree within three years decreased from 79% for the class of 1990 to 74% for the class of 1995. The proportion taking four years or more rose from 21% to 26%. There are various possible explanations for this shift. Over this time period there has been a reduction in the number of 3-year bachelor programs offered by universities. Programs may take longer because they have work terms imbedded in them. Or students may take longer because they are taking time off to work, to raise money to complete their education, a possible response to increases in post-secondary costs.

III Young graduates by sex and discipline

The number of young graduates increased from 1990 to 1995, but 72% of the growth at the college level were men while 85% of the growth at the bachelor level were women.

Between 1990 and 1995, the number of young college graduates increased 23%; men accounted for over two-thirds of this growth. Over the same period, the number of young university graduates increased 16% but, in this case, women represented 85% of the growth. If young "mainstream" graduates in 1995 are considered as a whole, three in ten are college graduates. In this college population, women have a slight edge, accounting for 54% of the total. Among the larger bachelor population, 60% are women, up from 56% in 1990.

Business and commerce was the most popular field of study among college graduates in 1995 (Chart 1 and Table A1). Engineering and applied sciences ranked second, followed by social sciences and services. These three disciplines together account for 70% of all 1995 college graduates targeted in this study.

Chart 1

Distribution of young college graduates by field of study 1990 and 1995

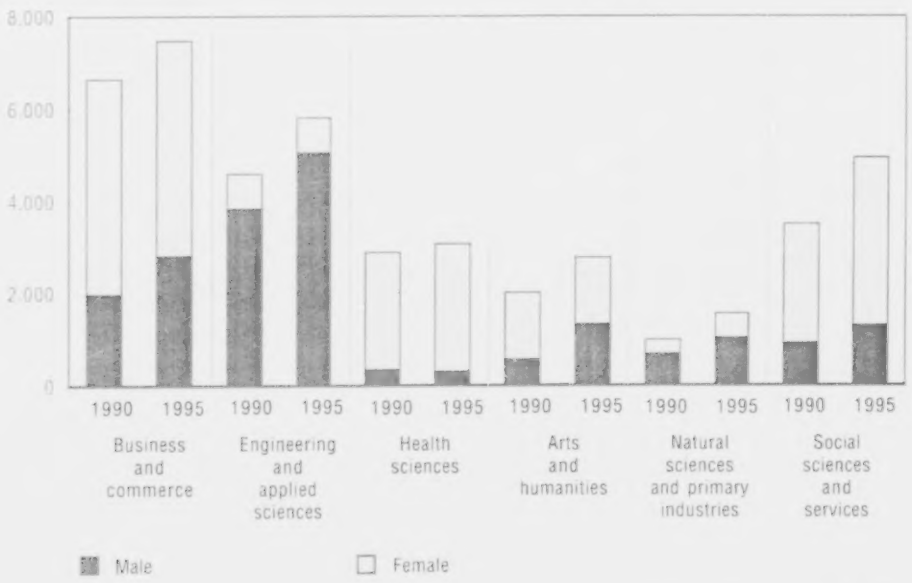

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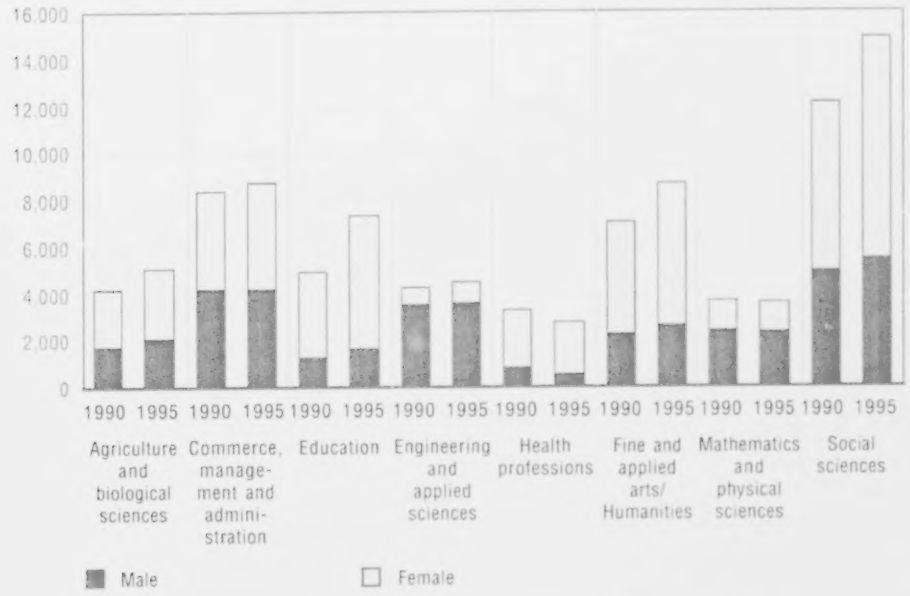
Chart 2
Distribution of young bachelor graduates by field of study 1990 and 1995



If business and commerce are in first place overall, it is because of academic choices made by women. Fully 33% of college women graduated from this field, compared with 24% of the men. Men were actually more likely to graduate from engineering and applied sciences, which account for 42% of male college graduates in the class of 1995. Only 6% of women graduated from this field at the college level.

Profound gender differences persist in the academic choices of college students.

In fact, profound gender differences persist in the academic choices of college students, evident across the broad spectrum of disciplines. Graduates with training in social sciences and services make up 26% of female graduates compared with 11% of male graduates. College level health science programs are female dominated, while natural sciences and primary industries are male dominated. Only in the arts and humanities is the gender balance fairly even.

At the bachelor level, the social sciences were the field that garnered most young graduates in 1995, 25% of the total (Chart 2). The three other disciplines with large numbers of graduates were commerce, management and administration (17%), the humanities (15%) and education (10%). Women predominate in the social sciences, the humanities, education, and agriculture and biological sciences.

The college disciplines that saw the largest relative growth between 1990 and 1995 were natural sciences and primary industries (up 61%) and social sciences and services (up 41%). Health sciences experienced the smallest growth rate in the size of the graduating class (9%). At the bachelor level, the number of young health graduates actually declined from 1990 to 1995.

IV Taking further education

The NGS surveys graduates two and five years after graduation. But many graduates go on to take further education. The survey shows that, five years after graduation, young bachelor graduates were more likely than college graduates to have obtained an additional post-secondary certificate or degree (Table 3). In 1995, about three quarters of college graduates did not carry their studies further, compared with about 65% of bachelor graduates. The proportion going on to further study was about the same for men and women college graduates but, at the bachelor level, women were more likely than men to pursue further studies.

Table 3

Proportion of young bachelor and college graduates not attaining further education by sex, class of 1986, 1990 and 1995

	1986	1990	1995
College graduates	82.0	73.6	75.8
Male	79.8	70.0	76.3
Female	83.7	75.9	75.3
Bachelor graduates	75.6	60.3	65.4
Male	77.6	60.4	67.5
Female	73.7	60.3	63.9

This study examines the labour market outcomes of young graduates but, at the time of the survey, some graduates were still in school. The ones who go on in school are in many cases the best qualified, so that five years after graduating at the bachelor or college level does not provide sufficient time to assess even their short-term labour market outcomes. To complicate matters further, the probability of continuing in school differs by field of study. It is therefore important to use caution in drawing comparisons of outcomes across various disciplines. Taking BA graduates as an example, an analysis restricted to BA graduates who do not go further will tend to under-value the BA, because it does not take into account students who go on from there to complete an MA, PhD, law degree and so on. Although a full analysis of the value of a degree to all graduates is not in the scope of this study, this section provides a profile of graduates who do go further, by discipline.

As noted above, there are substantial differences by discipline in the proportion of graduates who go on to further studies. At the college level, about 80% of the 1995 graduates in business and commerce graduates had not attained further post-secondary credentials within five years of graduation. Among the broad groups of disciplines, business and commerce graduates were the least likely to go further in their studies. In contrast, 69% of health science graduates did not pursue further studies. At the college level, this was the field where chances of going further were the greatest (Table 4).

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In the case of bachelor graduates, there was a wider variation by field of study in the proportion going on to further studies. Only 50% of youth graduating in agriculture and biological sciences stopped at the bachelor level, compared with 82% of graduates in commerce, management and administration.

Table 4

Proportion of young bachelor and college graduates not attaining further education by field of study, class of 1990 and 1995

	1990	1995
College	73.5	75.8
Business and commerce	79.0	81.3
Engineering and applied sciences	68.4	74.6
Health sciences and related	76.1	68.9
Arts and humanities	72.8	78.7
Natural sciences and primary industries	68.7	75.9
Social sciences and services	75.4	75.0
Bachelor	60.4	65.4
Agriculture and biological sciences	47.0	49.9
Commerce, management and administration	72.3	81.5
Education	69.6	79.3
Engineering and applied sciences	71.9	78.3
Health professions	75.1	71.5
Fine and applied arts and humanities	50.9	51.7
Mathematics and physical sciences	59.8	68.6
Social sciences	52.8	58.9

V Labour market climate, 1980 to 2000

The three graduating classes faced very different labour market conditions as they completed their studies. A graduate's success in securing a job quickly, at a good rate of pay, is affected by the labour market climate. Chart 3 shows the unemployment rate for young adults for 1980 to 2000, an important indicator of labour market conditions.

Chart 3

Unemployment rates of young adults, 1980 - 2000

The class of 1986 was interviewed in 1988 and again in 1991. The unemployment rate for young adults was relatively low in the years immediately following graduation. But four years after graduation, the Canadian economy entered a recession and, by 1991, the unemployment rate had climbed to 15.4% for 20-24 year olds and 12.4% for 25-29 year olds.

The class of 1990 entered the labour market as unemployment rates were beginning to climb. By 1992, they were facing the trough of the business cycle, with unemployment at 15.8% for 20-24 year olds. The next time the class of 1990 was interviewed, in 1995, unemployment rates were falling again, but were still at levels higher than the year they had graduated.

When the class of 1995 was interviewed for the first time, in 1997, the unemployment rate was hovering around 13% for 20-24 year olds. But five years after graduation, the class of 1995 found itself in much more favourable labour market conditions. For 25-29 year olds, the unemployment rate reached the lowest level experienced by any of the three cohorts.

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VI Labour market transitions of young graduates

Two and five years after graduation, college and bachelor graduates were more likely to have a job than youth with a high school education only. Among those with a job, a higher proportion was working full-time. By way of illustration, Table 5 compares NGS data for young "mainstream" graduates from the class of 1995 to Labour Force Survey results for high school graduates with no post-secondary education. Note that the employment rate measures the percentage of graduates (or young adults) with a job; the unemployment rate shows the percentage of the *labour force* that is unemployed (without work and looking for work).[1]

Table 5

Employment rates and unemployment rates for the Class of 1995 (young graduates) and for young adults with high school only, 1997 and 2000

	Employment rate (%)			
	Total	Full-time	Part-time	Unemployment rate (%)
College graduates				
1997	88.0	73.0	14.9	6.9
2000	93.5	85.1	8.3	3.3
Bachelor graduates				
1997	83.3	68.4	14.7	8.1
2000	89.9	82.3	7.5	5.4
20-24 year olds, high school only				
1997	69.9	52.6	17.3	13.2
2000	72.6	58.2	14.4	10.8
25-29 year olds, high school only				
1997	74.0	64.2	9.8	10.7
2000	78.4	68.7	9.7	7.4

Note: Data for youth with high school only is based on annual averages from the Labour Force Survey.

Five years after graduation, young bachelor and college graduates invariably fare better than young people with only high school.

Although there are variations in employment and unemployment rates related to the business cycle, the graduates invariably fare better than young people with high school only. Comparable results for all three graduating classes, by sex, are presented in Tables A2 to A4.

Gender differences in employment were much more pronounced among young adults with high school only than among young college and bachelor graduates. For example, in 2000, the employment rate for college graduates from the class of 1995 was 95.2% for men and 92.1% for women. Among bachelor graduates, the gap was even smaller: 91.4% versus 88.9%. But among 20-24 year olds with high school only, the rates were 76.5% and 67.7% for men and women respectively. The gap was even larger among 25-29 year olds (86.0% versus 69.5%).

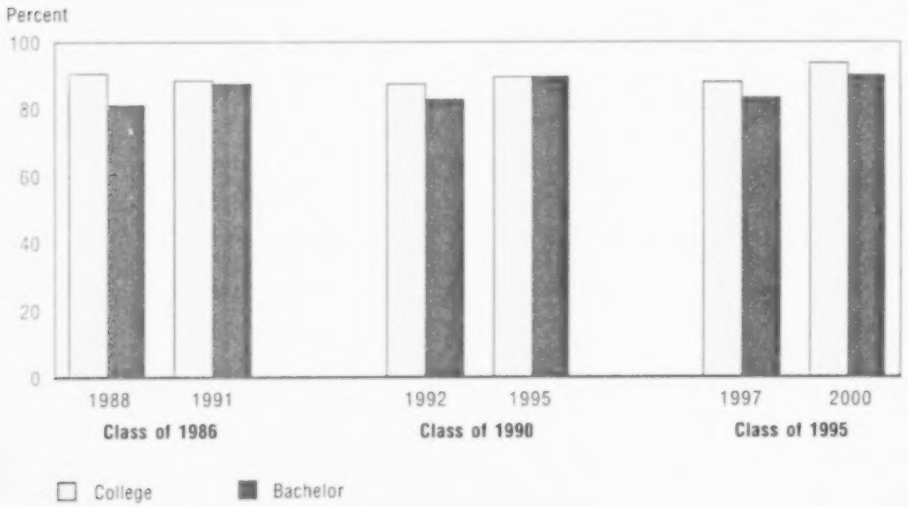
Family responsibilities may be one reason why female high school graduates were so much less likely than men to have jobs. According to the 2001 General Social Survey, 33% of women aged 20-29 with only high school credentials had a child living in their household, compared to 30% for college graduates and 16% for university graduates. The average age at which women in this age group had their first child increases from 21.2 years for high school graduates, to 22.6 years for college graduates, and 25.2 years for university graduates. (It should be noted that these data refer to women who start their families before age 30.)

College graduates tend to make the transition to the labour market more quickly than bachelor graduates.

College graduates make the transition to the labour market more quickly than young bachelor graduates. Two years after graduation, college graduates were more likely than bachelor graduates to be working, but by five years after graduation, bachelor graduates from the 1986 and 1990 graduating classes had closed this gap. For the class of 1995, college graduates were still ahead five years after graduation, but the gap had narrowed (Chart 4).

Chart 4

Employment rates of young college and bachelor graduates two and five years after graduation



Unemployment rates tell a similar story: bachelor graduates appear to have a harder time finding work right after graduation. For all cohorts, the unemployment rate two years after graduation was higher than for college graduates. Five years after graduation, however, for the classes of 1986 and 1990, the situation was reversed, and bachelor graduates had lower unemployment rates. The 1995 college graduates still had a lower unemployment rate in 2000, 3.3% versus 5.4% for young bachelor graduates. The longer transition to employment for bachelor graduates is partly due to the fact that some bachelor graduates have continued with further education and have not, therefore, completed their transition to the world of work.

For the class of 1995, over 90% of graduates from all fields of study at the college level were working five years after graduation (Table A5). The proportion of young 1995 college graduates working in 2000 ranged from 91% for business and commerce, and arts and humanities, to 96% for health sciences. At the bachelor level, the variation in employment rates was greater, ranging from 84% for education graduates to 96% in engineering and applied sciences.

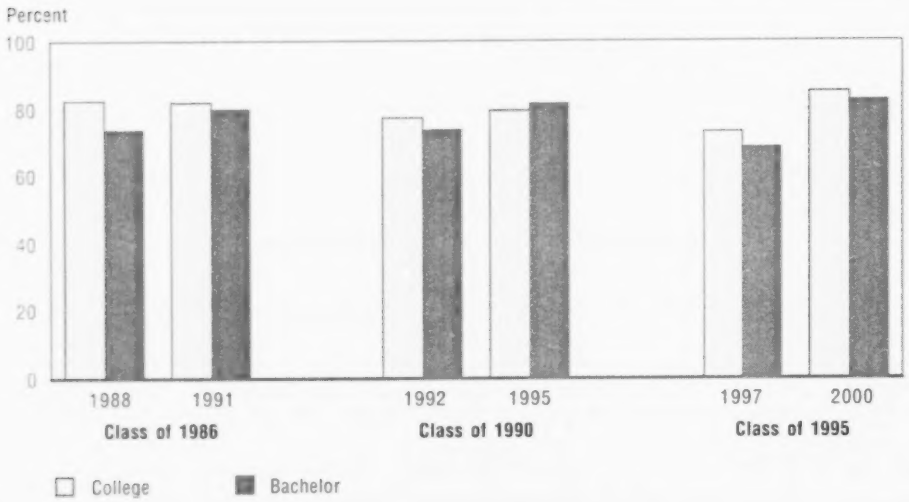
While employment rates improved from two to five years after graduation for 1995 college and bachelor graduates, the increase was most dramatic for engineering and applied sciences, and health sciences. The only group of 1995 graduates who were less likely to be working in 2000 than in 1997 were education graduates.

Full-time versus part-time work

Getting full-time work is an important issue for youth moving into the labour market. Both bachelor and college graduates generally had higher rates of full-time work five years after graduation than two years after. The increase was most pronounced for the class of 1995 (Chart 5).

Chart 5

Percentage of young graduates working full-time two and five years after graduation



Over time, there has been a shift in the percentage of graduates working part-time rather than full-time two years after graduation. While the overall employment rates two years after graduation were much the same for all three graduating classes, the percentage of college graduates working in part-time jobs increased from 7.9% to 10.5% to 14.9%. For bachelor graduates, this pattern was similar: the percentage of graduates in part-time jobs two years after graduation increased from 7.6% to 9.4% to 14.7%. This increase in part-time employment

holds true for both male and female graduates, but is not a reflection of the overall trends in part-time employment for youth. According to the Labour Force Survey, following a general increase in part-time employment rates in the 1980s, the rate for all youth has been stable since 1992 and not too different from the adult rate.

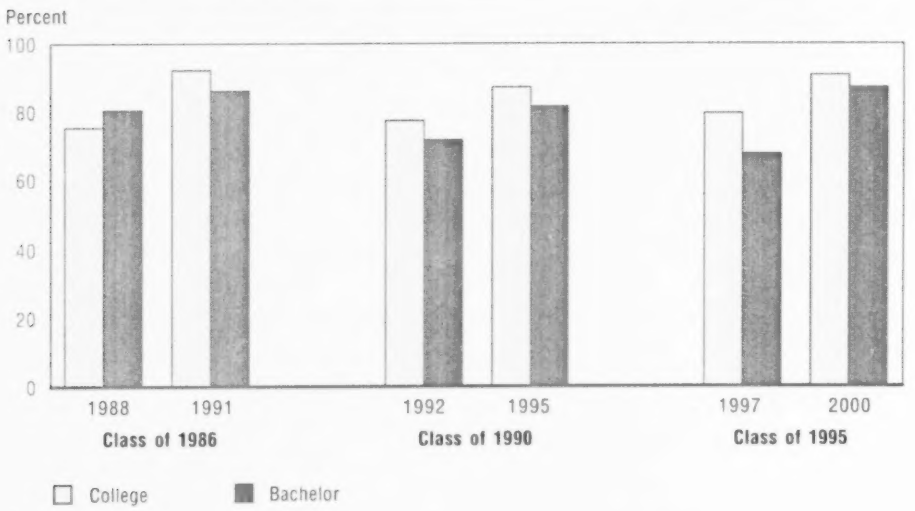
Five years after graduation, over 80% of the young 1995 college graduates from all fields of study were working full-time. This ranged from 81% for health sciences to 95% for engineering. At the bachelor level, full-time employment rates ranged even more widely by field of study, from 78% for education to 97% for engineering and applied sciences (Table A6).

Permanent employment

Job security is also an important facet of job quality. Graduates were asked whether the jobs they held were permanent (with no set termination date), temporary (with a definite termination date), or seasonal. Two years after graduation, community college graduates of the class of 1990 and 1995 were more likely to have a permanent job than were bachelor graduates. The same was true five years after graduation but the gap was smaller for the class of 1995 (Chart 6).

Chart 6

Percentage of young employed graduates with permanent jobs two and five years after graduation



For all cohorts, the proportion of graduates with permanent jobs was higher five years after graduation than it was two years after graduation. In the most extreme case, only 68% of bachelor graduates from the class of 1995 had a permanent job in 1997 but this had jumped to 87% by 2000. While cyclical factors no doubt contributed, transition into the labour market may also be more tortuous than in the past, with a more drawn out job matching process.

Nonetheless, over 90% of employed college graduates from the class of 1995 had a permanent job five years after graduation, no matter what the field of study (Table A7). At the bachelor level, there was a wider range in permanent employment rates across disciplines, from 72% in agriculture and biological sciences to 97% in engineering and applied sciences.

For the class of 1995, over 90% of college graduates had a permanent job five years later, and this is true for all broad groups of disciplines. For bachelor graduates, the permanent employment rates varied more by field of study.

Job-education match

Another measure of job quality is the match between the level of education attained and the level of education required by jobs. In the NGS, this is assessed through a series of questions to graduates about the educational requirements of their job.

Although college graduates have an edge in securing a permanent job, bachelor graduates have a substantial advantage when it comes to getting a job that requires their level of education. For example, for the class of 1995, 23% of bachelor graduates were working in a job in 2000 that required less than their education level compared with 38% of college graduates (Table A8).

Among 1995 bachelor graduates, 23% were working in a job that required less than their level of education five years later; for college graduates, the proportion was 38%.

In the three-year interval between the two NGS interviews, both college and bachelor graduates seem to progress towards holding a job that matches their level of education. Once again, this suggests a transition to work that is still in progress two years after graduation.

VII Earnings of young graduates

Young 1995 bachelor graduates working full-time had median earnings of $32,000 in 1997, well above the $25,000 of their college counterparts. (Median earnings split the population of interest into two equal groups, half earning more and half earning less.) The absolute gap of $7,000 persisted five years after graduation, although median earnings for the two groups had risen to $40,000 and $33,000 respectively (Table A9).

Both male and female bachelor graduates tend to earn more than the college graduates, but the earnings difference is larger for females.

The best-paid disciplines for 1995 college graduates five years later were engineering and applied sciences, with median earning of $40,000. The same is true for bachelor graduates, with median earnings of $56,000 in 2000.

The best-paid disciplines for 1995 college graduates are engineering and applied sciences, with median earnings in 2000 of $40,000, followed by health sciences ($34,000). The lowest paid field of study for college graduates is business and commerce. For 1995 bachelor graduates, the best paying disciplines are engineering and applied sciences (median earnings of $56,000 in 2000) and mathematics and physical sciences ($54,000). Only one field of study at the college level – engineering and applied sciences – resulted in salaries within the range of university disciplines.

Chart 7

Median earnings of young 1995 college graduates working full-time, two and five years after graduation, by field of study

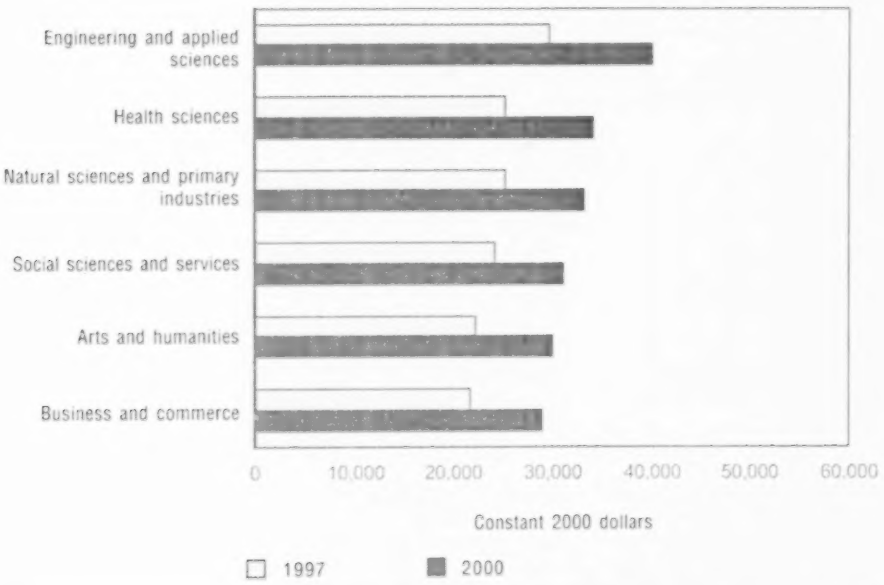
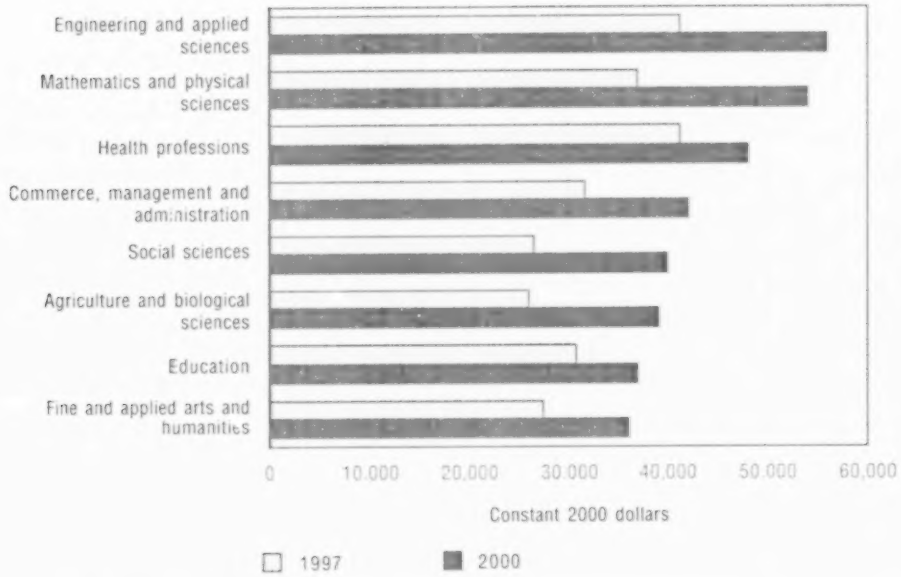


Chart 8

Median earnings of young 1995 bachelor graduates working full-time, two and five years after graduation, by field of study



The distribution of earnings in a given field is important, as well as the median. Some disciplines may be associated with a very wide range of earnings whiles others tend to pay salaries that are clustered around the median. Table A10 shows the earnings by field of study for the 25th and 75th percentiles – that is, the earnings band that covers the middle 50% of graduates.

In the same vein, Charts 9 and 10 rank the disciplines by median earnings, from top to bottom, and show the range of earnings received by the middle half of graduates in each field. Clearly some fields offer greater opportunity for higher earnings or greater risk of lower earnings. For example, while college graduates in social sciences and arts and humanities have about the same median earnings, the earnings of social science graduates are quite clustered around the median while arts and humanities graduates face greater "risk" of substantially lower – or higher – earnings.

At the university level, earnings of education graduates are most clustered about the median. In contrast, mathematics and physical sciences offer not only relatively high median earnings but also a quite wide variation.

Chart 9

2000 Quartiles for employment income for young 1995 college graduates by field of study

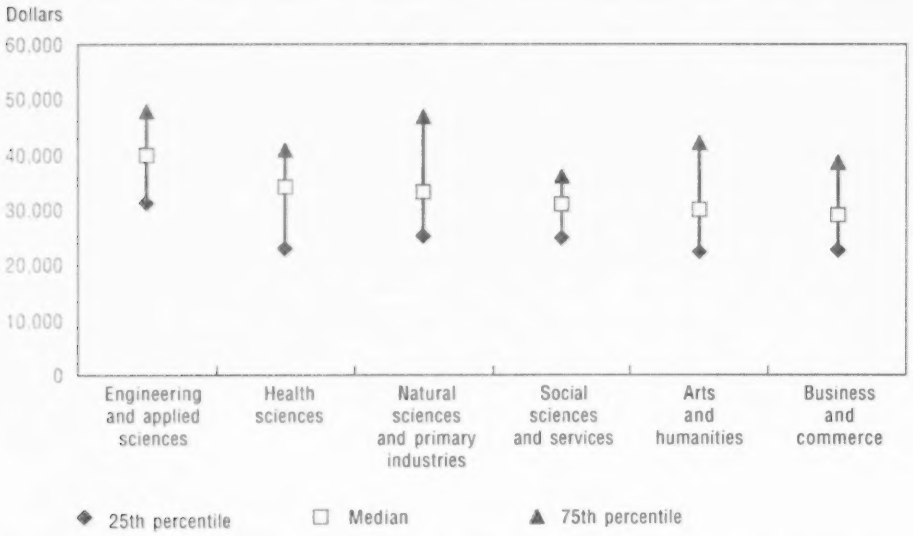
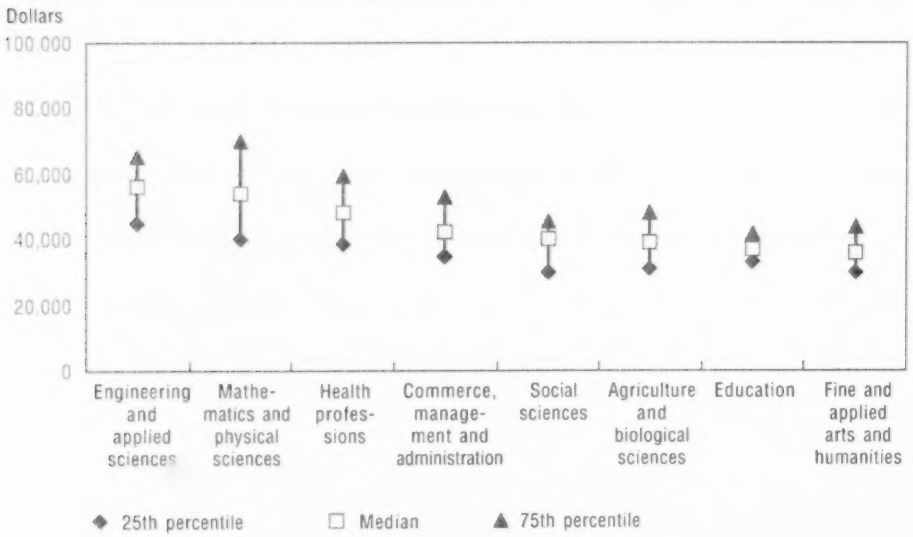


Chart 10

2000 Quartiles for employment income for young 1995 bachelor graduates by field of study



VIII Student loans

Between 1986 and 1995, average tuition fees for university undergraduates increased 118% (in current dollars)[2]. Since university programs are generally longer and tuition is higher, it is not surprising that student debt levels for bachelor graduates exceed those college graduates.

For the class of 1990, community college graduates owed an average of $5,300 to federal and provincial loan programs when they graduated, compared with $8,800 for bachelor graduates (Table 6).

Table 6

Amounts owed to federal and provincial loan programs, young graduates, Class of 1990 and 1995

	1990 graduates	1995 graduates
College	2000 constant $	
At graduation	5,300	8,300
2 years later	3,200	5,900
5 years later	2,100	3,800
University		
At graduation	8,800	11,800
2 years later	5,800	8,500
5 years later	3,800	5,400

The 1990 community college graduates had paid off 40% of their loan two years after graduation and 60% after five years. Bachelor graduates from the 1990 cohort had paid off 34% of their student loan two years after graduation, and 57% five years after graduation. In short, five years after graduation, the pattern was nearly identical for community college and bachelor graduates, with both groups having paid off roughly 60% of their student loans.

Compared to the 1990 graduates, the class of 1995 owed more in real terms at graduation than graduates in the class of 1990, but they had paid off almost as much of that loan five years after graduation.

Compared to the 1990 graduates, the class of 1995 owed more in real terms at graduation than graduates in the class of 1990, but they had paid off almost as much of that loan five years after graduation.

At graduation in 1995, community college graduates owed on average $8,300 in government loans, nearly 60% more than their 1990 counterparts. Bachelor graduates owed $11,800, up 34%. Both community college and bachelor graduates had paid off just over a quarter of the loan by two years after graduation, which was considerably less than for 1990 graduates. Five years after graduation, however, both community college and bachelor graduates had paid back 55% of their original loan, almost as much as the class of 1990.

Chart 11

Amount of student loans owed by young college graduates (2000 Constant $)

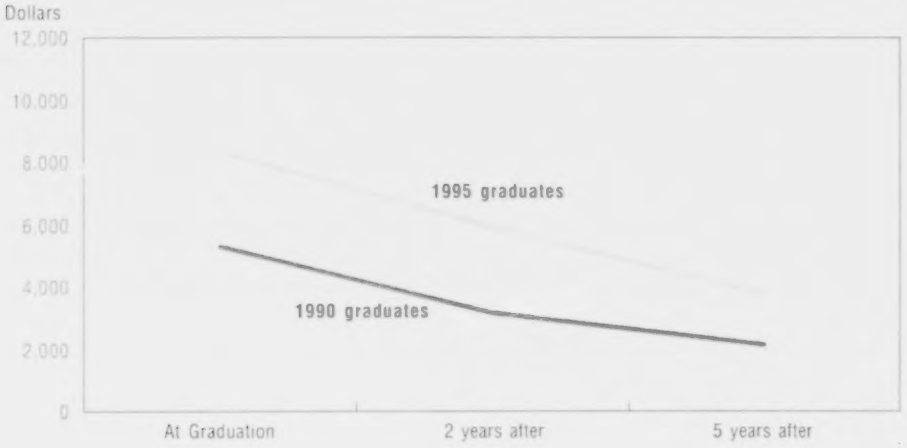
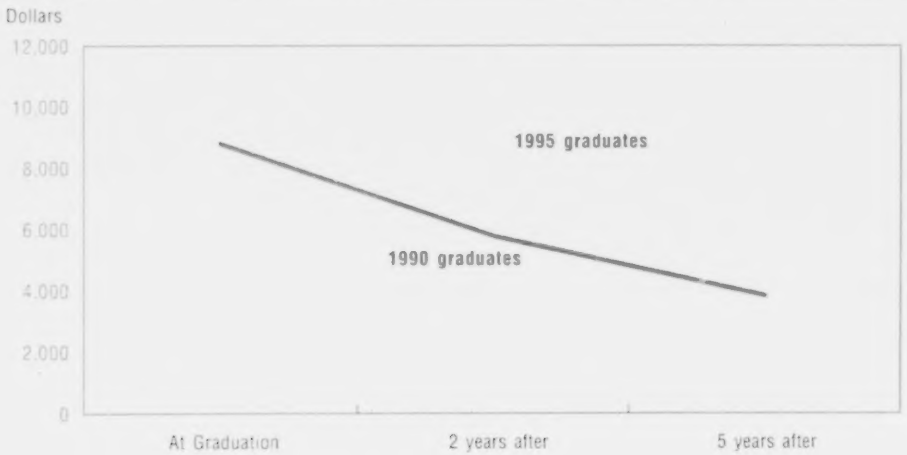


Chart 12

Amount of student loans owed by young bachelor graduates (2000 Constant $)



Graduates were asked, at two and five years after graduation, if they had any difficulty in paying back their student loans. While the overwhelming majority of young graduates did not report any difficulties, the 1995 graduates were more likely to do so than the young graduates of the class of 1990.

Among 1990 bachelor graduates, 15% reported difficulty two years after graduation and 13% five years out. In the case of 1995 bachelor graduates, 20% were experiencing problems two years after graduation, but this dropped to 16%, five years after graduation.

Table 7

Young college and bachelor graduates who stated that they had trouble repaying their government loans

	Total	Male	Female
College Graduates			
1990 graduates			
1992	8.4	11.8*	6.0 *
1995	11.0	11.5*	10.6 *
1995 graduates			
1997	13.1*	10.5**	15.5 **
2000	16.3	10.5*	21.7 *
Bachelor Graduates			
1990 graduates			
1992	14.8	15.0	14.7
1995	13.2	12.3	14.0
1995 graduates			
1997	19.8*	19.3**	20.3 **
2000	15.8	14.9*	16.5 *

Note: As a measure of sampling error, * indicates coefficient of variation (CV) between 16.6% and 33.3%.
** Indicates a C.V. over 33%. Caution should be used when interpreting these results.

About 16% of young 1995 bachelor and college graduates said they were having trouble repaying their government loans five years later.

Of the 1990 college graduates, 8% reported difficulties two years after graduation, and this increased slightly to 11% five years after graduation. 1995 college graduates were more likely than graduates from the class of 1990 to report difficulties in repaying their loans both two and five years after graduation: 13% were experiencing problems two years after graduating and this increased to 16% in 2000.

IX Conclusion

Overall, the "mainstream" graduates of the class of 1995 fared well in the labour market both two and five years after graduation. College graduates had good employment prospects regardless of their discipline. In fact, young "mainstream" graduates from all college fields of study had employment rates exceeding 90% five years after graduation.

At the bachelor level, employment rates for most fields of study were generally lower than for college graduates. Only the 1995 bachelor graduates in commerce, engineering and social sciences had employment rates above 90% in 2000. Graduates from other disciplines still fared well.

Both college and university graduates from the class of 1995 were more likely to have a job in 2000 than in 1997. This holds for most disciplines. However, for university graduates in the field of education, the employment rate actually fell from 91% to 84% during that period.

There were significant changes in economic conditions faced by the three graduating classes in this study. For the class of 1986, the labour market had deteriorated between 1988 to 1991, the two years this cohort was interviewed. The class of 1990 started out in a recession and saw conditions improve somewhat five years after graduation. The class of 1995 graduated to an improving economy that was at its healthiest in 2000 for the years examined in this study.

College and university graduates have done consistently done well when it comes to getting a job and one that pays well. For all three graduating classes, over 85% of college graduates and over 80% of bachelor graduates were working within two years of graduating. For the class of 1995, 80% of college graduates had permanent jobs two years after and 90% had permanent jobs five years after graduating. For the young bachelor graduates, the move to permanent employment was slower, but over 85% had permanent jobs five years after graduation.

While college graduates moved into the labour market more quickly, the bachelor graduates generally got better paying jobs. For both college and bachelor graduates, engineering and applied sciences consistently paid the best. In fact, the median income for 1995 college graduates in this field was equal to the median income of bachelor graduates overall.

Unemployment rates for bachelor graduates were less sensitive to shifts in the labour market conditions than the rates for community college graduates indicating that higher levels of education may help to insulate individuals from the effects of economic downturns. The pattern of unemployment during favourable and unfavourable labour market climates for community college graduates was similar to that of all youth aged 20 to 24 and 25 to 29 whereas for bachelor graduates, labour market prospects seemed less affected by the business cycle. Moreover, for the class of 1986, while college graduates faced higher unemployment rates going into the recession, unemployment rates for bachelor graduates actually fell.

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Over the fifteen years examined in this study, in spite of economic change and restructuring, and changes in the programs offered by post-secondary institutions, the labour market outcomes for young college and university graduates have remained relatively stable. In fact, both college and bachelor graduates were better able to withstand the recessionary pressures of the early 1990s than were youth with only high school.

At the same time, however, the cost of a post-secondary education has increased, and students have left school with increasing student debt loads. Between 1990 and 1995, student debt upon graduation increased 57% for college graduates and 34% for bachelor graduates. While an increasing number of graduates report having difficulties paying off their student loans, the overwhelming majority of graduates did not report any difficulties paying off their loans.

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Appendix A

Table A1

Distribution of young college and bachelor graduates, by major field of study and sex

	Total		Males		Females	
	1990	1995	1990	1995	1990	1995
College graduates						
Total	**21,200**	**26,000**	**8,500**	**11,900**	**12,700**	**14,100**
Business and commerce	6,600	7,500	2,000	2,800	4,700	4,700
Engineering and applied sciences	4,600	5,800	3,800	5,000	800	800
Health sciences	2,500	2,800	300*	300*	2,500	2,800
Arts and humanities	2,000	2,800	600	1,300	1,400	1,400
Natural sciences and primary industries	1,000	1,600	700	1,000	300	500
Social sciences and services	3,500	4,900	900	1,300	2,600	3,700
Bachelor graduates						
Total	**49,100**	**56,900**	**21,700**	**22,900**	**27,400**	**34,000**
Agriculture and biological sciences	4,200	5,100	1,700	2,100	2,500	3,000
Commerce, management and administration	8,400	8,700	4,200	4,200	4,200	4,600
Education	5,000	7,300	1,300	1,600	3,700	5,700
Engineering and applied sciences	4,200	4,500	3,500	3,600	700	900
Health professions	3,300	2,800	800	500	2,500	2,300
Fine and applied arts and humanities	7,000	8,700	2,300	2,600	4,700	6,100
Mathematics and physical sciences	3,600	3,600	2,400	2,300	1,300	1,300
Social sciences	12,100	14,900	4,900	5,500	7,200	9,400

Note: Totals exclude graduates in general programs or who did not indicate field of study. All numbers are rounded to the nearest 100, but analysis is carried out on unrounded values (for example, for percentages).

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Table A2

Labour force status of young mainstream graduates from the Class of 1986 and for young adults with high school only, by sex, 1988 and 1991

	Employment rate			
	Total	Full-time	Part-time	Unemployment Rate
	%	%	%	%
College graduates				
1988	90.5	82.6	7.9	7.2
Men	89.8	85.2	4.6	8.0
Women	91.1	80.6	10.5	6.5
1991	88.4	81.8	6.5	7.3
Men	87.9	84.1	3.8*	9.1
Women	88.8	80.1	8.6	5.9
Bachelor Graduates				
1988	80.8	73.2	7.6	11.0
Men	79.7	75.7	4.0	12.0
Women	81.8	70.9	10.9	10.0
1991	87.6	80.2	7.4	6.6
Men	88.0	84.9	3.3	6.9
Women	87.1	76.0	11.0	6.4
Youth aged 20-24, high school only				
1991	70.4	58.7	11.7	16.2
Men	71.4	63.0	8.4	19.0
Women	69.2	54.2	15.0	12.9
Youth aged 25 - 29, high school only				
1991	73.8	65.0	8.8	12.8
Men	80.5	76.7	3.8	13.8
Women	67.8	54.4	13.4	11.6

Note: Data for youth with high school only is based on annual averages from the Labour Force Survey. 1988 data are not presented due to a change in the measure of educational attainment. As a measure of sampling error, * indicates coefficient of variation (CV) between 16.6% and 33.3%. Caution should be used when interpreting these results.

Table A3

Labour force status of young mainstream graduates from the Class of 1990 and for young adults with high school only, by sex, 1992 and 1995

	Employment rate			Unemployment Rate
	Total	Full-time	Part-time	
	%	%	%	%
College graduates				
1992	87.7	77.2	10.5	9.2
Men	87.4	81.1	6.3	10.3
Women	87.9	74.6	13.2	8.4
1995	89.5	79.1	10.4	6.4
Men	91.4	85.1	6.2	6.2
Women	88.3	75.0	13.2	6.6
Bachelor Graduates				
1992	82.9	73.5	9.4	10.9
Men	82.0	76.5	5.5	11.6
Women	83.5	71.0	12.5	10.3
1995	89.5	81.5	8.0	5.7
Men	89.5	85.6	3.8	6.2
Women	89.6	78.2	11.3	5.3
Youth aged 20-24, high school only				
1992	69.6	56.1	13.5	15.8
Men	71.7	60.8	10.9	17.4
Women	67.5	51.0	16.5	13.7
1995	71.4	56.2	15.2	13.1
Men	74.7	64.1	10.6	13.6
Women	67.1	46.3	20.8	12.3
Youth aged 25-29 high school only				
1992	72.2	63.3	8.9	12.9
Men	79.4	75.5	3.9	14.2
Women	65.6	51.9	13.7	11.3
1995	72.1	62.6	9.5	12.4
Men	80.3	75.4	4.9	12.7
Women	63.3	48.9	14.4	12.1

Note: Data for youth with high school only is based on annual averages from the Labour Force Survey.

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Table A4

Labour force status of young mainstream graduates from the Class of 1995 and for young adults with high school only, by sex, 1997 and 2000

	Employment rate			Unemployment Rate
	Total	Full-time	Part-time	
	%	%	%	%
College graduates				
1997	88.0	73.0	14.9	6.9
Men	87.6	80.1	7.4	7.5
Women	88.3	67.0	21.2	6.5
2000	93.5	85.1	8.3	3.3
Men	95.2	89.9	5.2*	3.4*
Women	92.1	81.1	11.0	3.2*
Bachelor Graduates				
1997	83.3	68.4	14.7	8.1
Men	83.3	73.5	9.5	7.8
Women	83.3	64.9	18.2	8.2
2000	89.9	82.3	7.5	5.4
Men	91.4	85.6	5.8*	4.4*
Women	88.9	80.1	8.7	6.2
Youth aged 20-24, high school only				
1997	69.9	52.6	17.3	13.2
Men	74.9	62.9	12.0	12.8
Women	63.8	39.9	23.9	13.6
2000	72.6	58.2	14.4	10.8
Men	76.5	66.7	9.8	10.8
Women	67.7	47.4	20.3	10.8
Youth aged 25-29 high school only				
1997	74.0	64.2	9.8	10.7
Men	82.9	77.4	5.5	10.7
Women	64.0	49.4	14.6	10.8
2000	78.4	68.7	9.7	7.4
Men	86.0	81.2	4.8	7.2
Women	69.5	53.6	15.9	7.7

Note: Data for youth with high school only is based on annual averages from the Labour Force Survey. As a measure of sampling error, * indicates coefficient of variation (CV) between 16.6% and 33.3%. Caution should be used when interpreting these results.

Table A5

Percentage of young graduates who were employed 2 and 5 years after graduation, by field of study

	1990 graduates		1995 graduates	
	1992	1995	1997	2000
	%	%	%	%
College graduates	87.7	89.5	88.0	93.5
Business and commerce	87.8	87.8	87.3	91.0
Engineering and applied sciences	85.9	91.1	82.9	95.4
Health sciences	95.5	94.1	87.5	96.1
Arts and humanities	84.3	86.1	91.1	91.2
Natural sciences and primary industries	87.7	88.3	92.5	95.4
Social sciences and services	87.8	91.4	92.4	95.2
Bachelor graduates	82.9	89.6	83.3	89.9
Agriculture and biological sciences	71.5	78.1	66.6	86.9
Commerce, management and administration	88.6	94.8	90.3	94.8
Education	86.1	90.6	91.3	83.8
Engineering and applied sciences	84.1	93.0	87.6	95.7
Health professions	91.8	93.7	81.4	87.3
Fine and applied arts and humanities	82.2	86.5	78.8	89.8
Mathematics and physical sciences	80.8	87.9	80.5	88.1
Social sciences	80.6	90.0	84.4	90.3

Table A6

Percentage of graduates with full-time employment, 2 and 5 years after graduation, by field of study

	1990 graduates		1995 graduates	
	1992	1995	1997	2000
	%	%	%	%
College graduates	77.2	79.2	73.1	85.2
Business and commerce	80.4	80.4	73.3	83.7
Engineering and applied sciences	82.3	87.2	78.9	93.2
Health sciences	71.9	68.1	61.3	80.1
Arts and humanities	65.5	78.3	74.6	81.1
Natural sciences and primary industries	83.2	83.3	86.3	90.8
Social sciences and services	78.9	80.1	69.9	82.4
Bachelor graduates	73.5	81.6	68.4	82.3
Agriculture and biological sciences	63.8	71.0	55.4	79.6
Commerce, management and administration	85.1	91.4	82.7	90.9
Education	69.4	76.6	65.5	74.2
Engineering and applied sciences	83.2	91.6	85.9	94.5
Health professions	85.4	82.9	66.3	75.7
Fine and applied arts and humanities	65.2	74.3	56.7	80.0
Mathematics and physical sciences	76.9	85.2	72.8	84.7
Social sciences	68.8	80.2	67.6	80.7

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Table A7

Percentage of working graduates with permanent jobs 2 and 5 years after graduation

	1990 graduates		1995 graduates	
	1992	1995	1997	2000
	%	%	%	%
College graduates	77.4	87.2	79.6	90.9
Business and commerce	80.0	89.7	83.8	91.0
Engineering and applied sciences	77.3	89.4	82.3	92.1
Health sciences	81.3	84.1	81.7	91.8
Arts and humanities	70.3	84.3	73.1	90.5
Natural sciences and primary industries	65.8	80.8	69.9	90.3
Social sciences and services	77.5	87.1	77.2	90.5
Bachelor graduates	72.0	81.7	67.8	87.4
Agriculture and biological sciences	60.3	72.1	57.5	71.7
Commerce, management and administration	91.0	94.9	79.0	93.1
Education	62.9	71.1	51.5	85.2
Engineering and applied sciences	87.0	94.3	88.3	96.8
Health professions	78.3	78.7	76.0	82.8
Fine and applied arts and humanities	61.9	74.5	57.5	84.8
Mathematics and physical sciences	76.0	87.5	78.4	91.4
Social sciences	64.6	78.1	67.6	88.5

Table A8

Percent of young employed graduates reporting work that required less than their level of education, by field of study

	1990 graduates		1995 graduates	
	1992	1995	1997	2000
	%	%	%	%
College graduates	36.0	27.5	38.0	37.8
Business and commerce	46.5	36.3	47.6	44.3
Engineering and applied sciences	32.0	25.5	32.9	34.3
Health sciences	12.8	7.9	24.3*	25.6 *
Arts and humanities	50.1	41.5	47.9	45.0
Natural sciences and primary industries	33.0	29.9	42.4	62.2
Social sciences and services	34.7	26.6	36.3	33.9
Bachelor graduates	27.5	18.6	26.8	23.0
Agriculture and biological sciences	32.8	18.1	38.1	21.5
Commerce, management and administration	22.6	14.8	26.7	21.6 *
Education	16.9	13.6	19.6*	10.7**
Engineering and applied sciences	8.1	8.9	8.7*	9.1 *
Health professions	23.9	18.5	19.6*	16.1 *
Fine and applied arts and humanities	41.1	28.6	36.1	28.1
Mathematics and physical sciences	13.6	10.3	18.7*	17.0
Social sciences	39.4	25.4	36.0	34.3

Note: As a measure of sampling error, * indicates coefficient of variation (CV) between 16.6% and 33.3%. ** indicates a CV over 33.3%. Caution should be used when interpreting these results.

Table A9

Median earnings of 1995 youth graduates working full-time, two and five years after graduation, by field of study (2000 Constant $)

	1997	2000
	$	$
College graduates		
Total	**24,700**	**32,800**
Male	**28,300**	**38,500**
Female	**21,700**	**28,500**
Business and commerce	21,700	29,000
Engineering and applied sciences	29,600	40,000
Health sciences	25,200	34,000
Arts and humanities	22,300	30,000
Natural sciences and primary industries	25,200	33,200
Social sciences and services	24,300	31,100
Bachelor graduates		
Total	**31,500**	**40,000**
Male	32,700	45,000
Female	28,000	38,000
Agriculture and biological sciences	26,100	39,000
Commerce, management and administration	31,600	42,000
Education	30,800	37,000
Engineering and applied sciences	41,100	56,000
Health professions	41,100	48,000
Fine and applied arts and humanities	27,400	36,000
Mathematics and physical sciences	36,900	54,000
Social sciences	26,600	40,000

Note: All numbers are rounded to the nearest 100, but analysis is carried out on unrounded values.

Table A10

Range in employment income by field of study for young 1995 graduates 5 years after graduation

	25th percentile	Median	75th percentile
	$	$	$
College graduates			
Engineering and applied sciences	31,200	40,000	47,800
Health sciences	22,900	34,000	41,000
Natural sciences and primary industries	25,200	33,200	46,800
Social sciences and services	25,000	31,100	36,000
Arts and humanities	22,400	30,000	42,000
Business and commerce	22,700	29,000	38,500
Total	**25,000**	**32,800**	**41,600**
Bachelor graduates			
Engineering and applied sciences	45,000	56,000	65,000
Mathematics and physical sciences	40,000	54,000	70,000
Health professions	38,500	48,000	59,300
Commerce, management and administration	35,000	42,000	53,000
Social sciences	30,000	40,000	45,500
Agriculture and biological sciences	31,200	39,000	48,000
Education	33,000	37,000	41,600
Fine and applied arts and humanities	30,000	36,000	43,900
Total	**33,000**	**40,000**	**50,000**

Note: All numbers are rounded to the nearest 100, but analysis is carried out on unrounded values.

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Appendix B

Survey methodology of the 2000 National Graduate Survey

Survey objectives

The NGS is a longitudinal survey of recent university and college graduates, yielding information on labour market experiences two and five years after graduation.

Target Population

Individuals who graduated from a Canadian postsecondary institution in 1995 constitute the target population.

Sample Design

The 1997 NGS design included a core sample and a buy-in sample. The sampling unit was individuals who had completed a certificate, diploma or degree from a post-secondary institution in 1995. The core sample was drawn from a stratified systematic random sample plan, with the stratification based on the province of the institution, the certification level and the field of study. The buy-in sample was added to allow better precision of estimates in specific institutions.

In 2000, the NGS respondents were interviewed again. This 2000 follow-up survey included respondents living in both Canada and the United States. However, this report includes analysis carried out only on graduates resident in Canada at the time of the 2000 interview.

The 1997 NGS did not include US residents. Instead, a separate survey of graduates who moved to the US (SGMUS) was carried out in 1999. These graduates were surveyed again in 2000 in a separate follow-up survey which will be release at a later date.

Data collection

Computer-assisted telephone interviews were conducted in Canada and in the United States from May to July 2000. The following table shows the number of respondents by the levels of certification used in stratification.

Certification Level Used in Stratification	Respondents
Trade / Vocational	7,216
Career / Technical (college)	7,834
Bachelor/1stProfessional degree	8,302
Master's	4 385
Doctorate	1,363
All	**29,100**

Response Rate

In all, 29,100 usable interviews were obtained from the 2000 interviews of the initial sample of 40,054, for a response rate of 72.7%. This rate varied by certification level as indicated in the following table.

Certification Level Used in Stratification	Sample	Respondents	Response Rate
Trade / Vocational	10,212	7,216	70.7%
Career / Technical (college)	10,482	7,834	74.7%
Bachelor/1st Professional Degree	11,509	8,302	72.1%
Master's	5,883	4,385	74.5%
Doctorate	1,968	1,363	69.3%
All	**40,054**	**29,100**	**72.7%**

Endnotes

1 This analysis is restricted to those who have not obtained additional degrees or diplomas. Labour market outcomes for all of the young graduates would likely be somewhat better since they would include outcomes for graduates with even higher levels of education.

2 Statistics Canada. Tuition and Living Accommodations Costs (TLAC) Survey.

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Culture, Tourism and the Centre for Education Statistics

Research Papers

Cumulative Index

Statistics Canada's **Division of Culture, Tourism and the Centre for Education Statistics** develops surveys, provides statistics and conducts research and analysis relevant to current issues in its three areas of responsibility.

The **Culture Statistics Program** creates and disseminates timely and comprehensive information on the culture sector in Canada. The program manages a dozen regular census surveys and databanks to produce data that support policy decision and program management requirements. Issues include the economic impact of culture, the consumption of culture goods and services, government, personal and corporate spending on culture, the culture labour market, and international trade of culture goods and services. Its analytical output appears in the flagship publication *Focus on Culture* (www.statcan.ca/english/IPS/Data/87-004-XIE.htm) and in *Arts, culture and recreation – Research papers*.

The **Tourism Statistics Program** provides information on domestic and international tourism. The program covers the Canadian Travel Survey and the International Travel Survey. Together, these surveys shed light on the volume and characteristics of trips and travellers to, from and within Canada. Its analytical output appears in the flagship publication *Travel-log* (www.statcan.ca/english/IPS/Data/87-003-XIE.htm) and in *Travel and tourism – Research papers*.

The **Centre for Education Statistics** develops and delivers a comprehensive program of pan-Canadian education statistics and analysis in order to support policy decisions and program management, and to ensure that accurate and relevant information concerning education is available to the Canadian public and to other educational stakeholders. The Centre conducts fifteen institutional and over ten household education surveys. Its analytical output appears in the flagship publication *Education quarterly review* (www.statcan.ca/english/IPS/Data/81-003-XIE.htm), in various monographs and in *Education, skills and learning – Research papers* (www.statcan.ca/english/IPS/Data/81-595-MIE.htm).

Following is a cumulative index of Culture, Tourism and Education research papers published to date

Arts, culture and recreation – Research papers

Forthcoming

Travel and tourism – Research papers

Forthcoming

Education, skills and learning – Research papers

81-595-MIE2002001	Understanding the rural-urban reading gap
81-595-MIE2003002	Canadian education and training services abroad: the role of contracts funded by international financial institution.
81-595-MIE2003003	Finding their way: a profile of young Canadian graduates